THE VETERINARY RECORD

A Weekly Journal for the Profession.

Edited by WILLIAM HUNTING, F.R.C.V.S.

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A STAMPEDE OF HORSES.

The account we reprint of a stampede of over 700 cavalry horses from an encampment near Southampton is taken from *The Daily Chronicle*. We hope the facts are not so serious as the reporter suggests. When such an event can take place in time of peace the inexperienced citizen wonders what may not occur in time of war! The report and flash of a revolver seems a very small thing to cause such a panic among Army horses. Slaughter of injured horses is at times inevitable, but if a revolver can cause such startling results it becomes very necessary to have some other means of destroying horses in presence of others. What the report means by a "silent hammer" which failed we do not know. Greener's killer is hardly silent, but its report is not loud and there is no flash.

Panic among animals, as among men, is not easily explained. It apparently arises as the result of some cause which at other times is in action without producing anything more serious than a passing excitement. Probably in the darkness and quietness of midnight sudden alarms act with greater intensity. Animals are greatly frightened by thunder-storms at night, and a bright flash of lightning followed by a sharp crack of thunder will send them galloping in all directions. Even in daylight a stampede of animals seems to be conducted without regard to obstacles—as though the terrified creatures were blind.

Very seldom does a storm effect direct injury to animals by lightning, but many storms cause panic, and the headlong flight of horses or cattle is accompanied by injury and death as the result of contact with wire or walls, or by falling into quarries or streams.

We should not have expected a single revolver shot to have caused a stampede of Army horses. We can, however, understand that when once panic arises no methods of restraint would prove effective in checking it. Ropes, hobbles, aud lines would all go like a ship's sails in a storm.

The event may perhaps suggest methods of prevention, or at any rate of ways to ameliorate the results of such a catastrophe in war time. There was at least one serious stampede of mules in South Africa.

SALIVARY CALCULUS—A SURGICAL NOTE.

A five-year-old thoroughbred mare had for over twelve months a hard swelling on the side of her left cheek just anterior to the angle of the jaw, it was about 1½ inches in length, and of the thickness of an ordinary lead pencil, its margins being well defined—it appeared immediately subcutaneous and was freely moveable for about an inch in any direction on the surface of the jaw. It apparently caused no inconvenience and was not treated in any way.

On the mare coming up from a summer's run in the paddocks the tumour was so increased in size as to be a blemish, and it was accompanied by a swollen condition of the parotid gland of the same side which it was feared might increase and interfere with respiration, or at all events considerably lessen her value as a steeplechaser. The tumour on the side of the cheek having been recognised as a salivary calculus in the duct of the parotid gland it was decided to remove it.

An incision was made through the skin the whole length of the tumour exposing the duct, into which a transverse incision was made at the end of the calculus towards the mouth, when pressure being made on the duct the calculus "popped out" and it was at once followed by a small flow of saliva from the open duct.

Two sutures were inserted in the external wound and an antiseptic pad of cotton wool applied by means of strips of adhesive plaster, the mare was put on the pillar-reins and a sloppy diet ordered. On the second day after the operation the pad became detached, and on the following day one of the sutures was loose, the wound suppurating and saliva escaping immediately the animal commenced to feed.

The quantity of saliva which escaped at each feed was extraordinary, running from the wound in a clear continuous stream, but none escaped except during the process of mastication.

The mare was brought into the Infirmary, the wound was cleansed, wiped as dry as possible, bathed with a little ether and collodion applied with a stiff brush over the wound and surrounding skin, frequent paintings with collodion were made for two days, a little iodoform being occasionally dusted on the surface so that a thick film was secured.

The mare was kept entirely without food for forty eight hours, and was fed only with mashes from a bowl for two days longer, after that she was given small quantities of hay.

On the fifth day the collodion film separated from the skin, when the wound was found quite closed,

and it very quickly healed, recovery being complete.

The swelling in the parotid region had quite disappeared in twelve hours after the removal of the calculus, having probably been due to the accumulation of saliva in the gland, owing to the mechanical obstruction in the main duct. The calculus was oval with a smooth surface, yellowish white in colour, and rather hard, but weighed only eight grammes.

SIDNEY VILLAR, F.R.C.V.S.

BRAIN TUMOURS.

A bay cart mare, six years old, on Aug. 13th had taken a load from Westminster to Liverpool Street, distance about 2½ miles, when she suddenly fell forward over the shaft. On being unharnessed she got up and was able to walk home. When seen she stood with the head depressed into the manger, fore legs crossed, breathing heavily, pulse intermittent; in a semi-comatose condition, with absolute inability to move fore extremities.

Diagnosis, tumour lateral ventricles.

These symptoms continued and increased in severity, the mare becoming quite blind. She was able to move hind legs tolerably well, but had very little control over the fore limbs. She would occasionally eat a little bran mash or a few pieces of carrot.

The symptoms continued with hardly any variation until the 24th when she was destroyed.

Post-mortem examination showed two large tumours, one on either side of the brain, situate in the lateral ventricles, the left being about four inches long and the right about two. They would be about twice as thick as a man's thumb and of a yellow colour, and fat-like consistence. On being cut the surface did not feel gritty, as is usually the case with brain tumours.

W. S. MULVEY, F.R.C.V.S.

EPIZOOTIC LYMPHANGITIS — SYMPTOMS.

In *The Veterinary Record* of 27th inst. Mr. A. Cornish-Bowden reports a case of epizootic lymphangitis. The symptoms described by this gentleman are not what one usually meets with, at least so far as my experience goes, and I cannot help thinking that the cryptococcus of epizootic lymphangitis was not responsible for all the symptoms shown. I have seen and treated a good many cases of this disease (both in India and England), and have not yet seen a single case that could be said to show any systemic disturbance, either before the lesions appeared or subsequently.

Mr. Bowden says: "When the horse was worked in the middle of July he was evidently sickening for some disorder," and that he thinks "the treatment the horse received at that time aggravated the disease (epizootic lymphangitis) which was developing." The word "sickening" as it is usually understood is not in my opinion applicable to this disease; and even if the horse had shown a few lesions of epizootic lymphangitis at the time he was worked (14th, 15th, and 16th July) I doubt if his capacity for work would have been much interfered with, if at all. He goes on to say: "I think it more probable that in the Army the cases are not reported to the veterinary officer until the premonitory symptoms are subsiding and those typical of the disease are making themselves manifest." This is most improbable; even if it might be so with the first horse to become infected it would not be so with those which subsequently developed the disease, because in a unit in which the disease has broken out a veterinary inspection of the horses is made daily, and I think it is reasonable to assume that if premonitory symptoms were usual, or even occurred occasionally, that they would have been detected before now in the Army, especially when it is remembered what exceptional facilities an Army veterinary officer has for keeping the horses in his charge under close observation.

He also says: "Another reason why this case is of interest is that apparently I have a complete cure without having recourse to the drastic and barbarous methods recommended by our brothers in the Army." I don't know what the methods are to which he refers, but I have treated about twenty cases of epizootic lymphangitis (in the Army) during the last few months, and in only two of them did I find it necessary to apply the actual cautery (one of those cases recovered, and it was doing badly until the actual cautery was used, the other case improved somewhat, but the ulceration was so extensive and deep seated that the horse was destroyed).

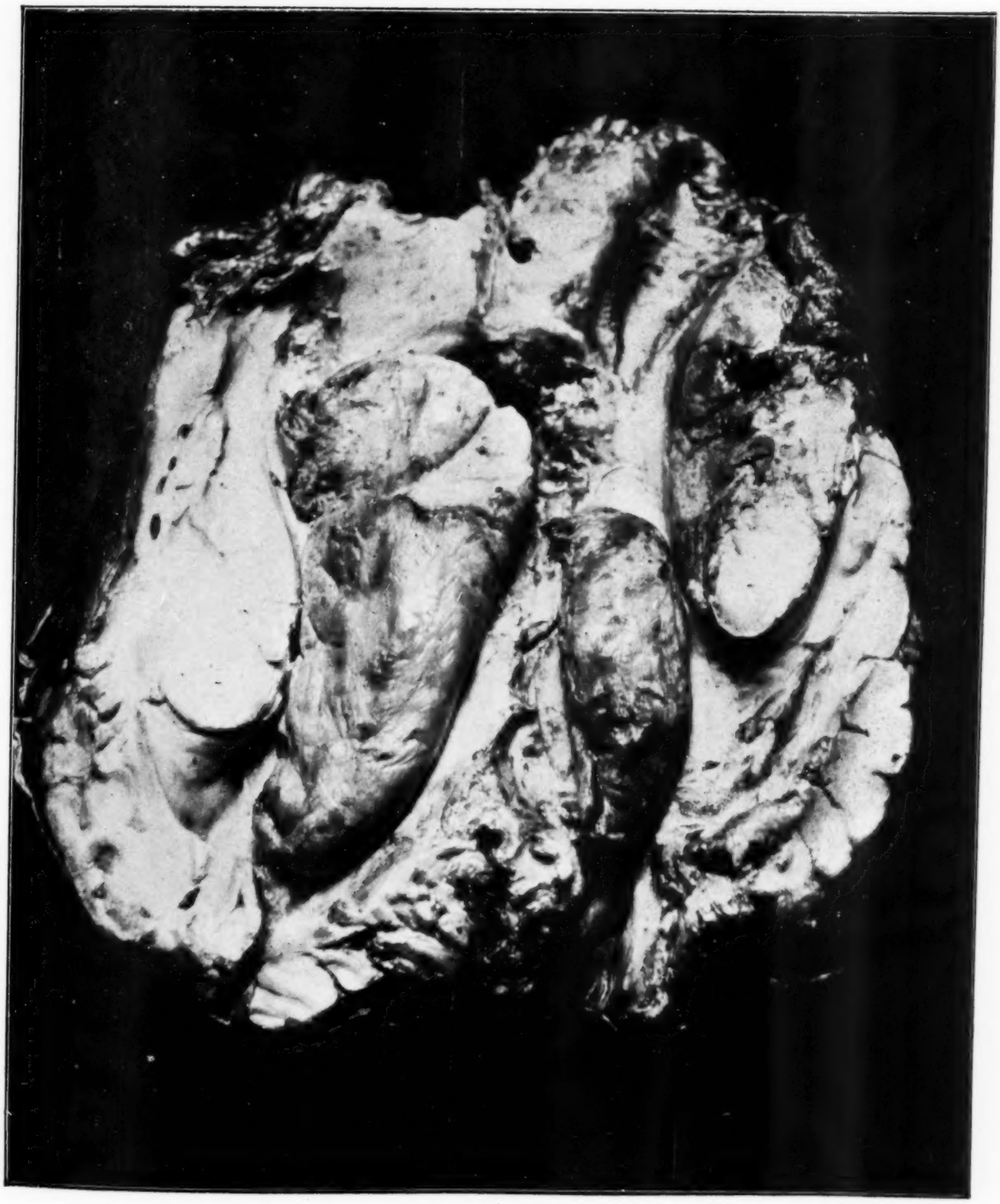
The only treatment the remainder of my cases had was a course of potassium iodide and hydrarg. biniodide rub. internally, and the ulcers were dressed twice daily with a solution of perchloride of mercury (1 in 1000). Some of the cases I think might have recovered without any treatment at all, as in most of them the ulcers showed a marked tendency to heal, and I found in some of them which improved up to a certain point, and then seemed to remain more or less stationary, that they healed quicker where the dressings were stopped and they were left entirely alone.

A.V.D.

PERSIAN SHEEP AND HEARTWATER.

By C. P. LOUNSBURY, Government Entomologist, and W. ROBERTSON, Bacteriologist to the Department of Agriculture (Cape).

The so-called "Persian" sheep bred in South Africa are susceptible to heartwater. They take the disease readily when exposed to infection, but recover without serious illness and thereafter possess a high degree of immunity. The infection does not appear to be materially modified by passing through them, ticks they drop during and just after their fever being fully as capable of inducing fatal reactions in ordinary sheep, goats, and cattle, as similar ticks from fatal cases of heartwater. The susceptibility and at the same time the resistance of the breed to the disease is such that a strain of infection may be passed successively by inoculation through sheep after sheep without any escaping a temperature reaction or suffering prostration, yet with-



BRAIN TUMOURS.

To illustrate Mr. Mulvey's notes, p. 148.

Members and friends National Veterinary Association at Powerscourt Waterfall, Thursday, August 18th, 1904.

Photo by Harrison & Son, Bray.

out causing apparent diminution in virulence of the strain for other animals. These are general deductions from the results of a series of experiments conducted jointly by the Veterinary and Entomological Branches of the Agricultural Department and now being brought to a close at their Animal Diseases Experiment Station, Rosebank, near Cape Town.

The Persian breed of sheep is hornless. The head and neck are black and the rest of the animal white. The body is compact and rounded, and the legs long and slim. The wool is short, very coarse and hair-like, and not marketable. The tail is small and short, and projects from an enormously enlarged rump. It is this last feature that best serves to characterise this breed, and "fat rumped" sheep would be a much more suitable designation for it than the name by which we now call it. The breed is supposed to be of very ancient origin, and there is a supposition that fat tailed sheep and likewise the down and mountain sheep of the British Isles were derived from it in times long past.

Not much information is available regarding the breed in its native habitats. From Youatt ("*Sheep, their breeds, management, and diseases*," pp. 22, 126 and elsewhere) it is evident that it has long existed in Persia, Thibet, parts of India, Palestine, Arabia, and Abyssinia; and this author suggest that it was the breed tended by the Israelities on their departure out of Egypt. Not all sheep kept in any of the countries named are of the one breed, however, and, even in Persia, Youatt states that the fat rumped breed is outnumbered by the fat tailed. Very little attention is bestowed on breeding in these half-barbarous lands and considerable variations amongst the fat rumped sheep which may have equally just claims to purity of blood exist in different parts. The chief variation alluded to by Youatt is difference in size.

The introduction of the breed into South Africa was by chance, and by mere chance also was the important discovery made that the breed would live and thrive in heartwater areas deadly for goats and other sheep. The original importation was in 1872. The story is that Captain Murison of a Cape Town shipping firm noticed a few of the animals on a vessel from the Mediterranean anchored in Table Bay. Being attracted by the singular appearance of the animals and learning they were for slaughter, he effected an exchange for Cape hamels. From Captain Murison, the sheep passed to the late Mr. Charles Barry who sent them to his farm in the Robertson district. Two of them were ewes and by good fortune one of these soon dropped a ram lamb. From these few animals was formed the first flock of Persian sheep in this country.

The original flock was divided many years ago and a number of pure or practically pure flocks are now scattered about the Colony.

Resistance to Heartwater.

The breed was a favourite from the start owing to its hardiness, great prolificacy, and early maturation for market. Quite naturally, in time, flocks were formed in and about the heartwater area, and then it was noticed by one party after another that the breed enjoyed apparent freedom from this dread disease. Public attention was drawn to the fact by the *Grahamstown Journal* for August 3rd, 1898. Therein it was cited that some months before Mr. John E. Wood had sent a truck load of Persians mixed with merinos and Cape sheep on to pasturage near Grahamstown. All the merinos and Cape sheep soon sickened and died of heartwater whilst the Persians remained unaffected. And further, that a number of lambs bred by Mr. Pater from merino ewes by a Persian ram escaped the disease when all their mothers died. Government Veterinary Surgeon R. W. Dixon in the following year commented on the apparent natural immunity of the breed in a departmental report. He was engaged in investigating heartwater at the time, and for experimental purposes farmed a mixed flock of Boer and Angora goats, and merino, Cape, and cross-bred Persian sheep on badly infected veld near Fort Beaufort. The Persians remained healthy whilst before the summer was half over from one-third to one-half of the goats, and the other breeds of sheep, had contracted and succumbed to the disease. The Persians in this case were the first cross of merinos with a Persian ram.

Primary Object of Experiments.

After experimental investigation at Cape Town had clearly demonstrated the association of heartwater with the Bont tick (*Amblyomma hebræum*), and had shown that cattle in common with goats and ordinary sheep would keep the infection active on a farm, the thought naturally suggested itself that the apparently immune Persian sheep, if farmed in the absence of susceptible stock, might perhaps serve to eradicate the infection and thus in a few years render the veld again as healthy for woolled sheep as it was before heartwater was introduced. The ticks would remain if only immune stock were kept, but they would after a season or two become innocuous as regards heartwater and would remain so until infection was reintroduced, which, if simple precautions were observed, might never happen or only after many years. Obviously the possibility was worth investigating, and in consequence were begun the instructive experiments which prompt this article. As already indicated, these experiments have shown that the Persians, though they may live and thrive on heartwater veld, are nevertheless susceptible to the disease and will doubtless indefinitely keep up the infection though farmed in the absence of animals to which the disease is fatal. The astonishing resistance of the breed, however, is a matter of much importance, and this resistance is very forcibly demonstrated by the experiments. It seems quite safe to assume that by farming this breed the very worst of the heartwater area can be made heavily productive of sheep for slaughter.

Enquiries were recently addressed to a few farmers known to be keeping flocks of the breed on heartwater veld. The following replies were received:—

"With regard to my experience with heartwater in Persian sheep, I may say that I find I can graze these on tick infested heartwater veld without the serious losses which would occur with the merino, Africander, or first cross Persian. The mortality amongst first cross Persians is less than amongst merino or Africander, while as for Angora goats, this farm is certain death to them."

(Signed) W. W. Gradwell.

Woodlands,
Carlisle Bridge, May 22nd, 1904.

"Ten years ago I was farming here with merino sheep, and lost heavily from heartwater. I then bought fifty pure or nearly pure Persian ewes and a pure Persian ram. I now have grazing about one thousand Persian sheep, and I have never had one die from heartwater although they feed over the same veld that the merinos did. I have never had any crossed animals (Persian and merino), but think they would be far more susceptible to the disease than purer bred Persians."

(Signed) Henry Hayter.

Hilton Farm,
near Atherstone Station, May 20, 1904.

To What is the Resistance Due?

As to what gives the Persian sheep resistance to heartwater, we cannot now say. Our present information is good as far as it goes, but it applies only to the descendants of a flock formed from a few sheep bred no one knows where, and a few later introduced from "Arabia." We are not sure it will apply to Persian sheep from Persia or from anywhere else.

Two explanations for the resistance seem possible.

One is that it may be a natural characteristic of the breed, a mere fortunate accident in nature, comparable perhaps to the immunity of Algerian sheep and white rats to anthrax (meltziekte); and the other that it is an hereditarily acquired tolerance brought about in the process of centuries of time by continual association with the disease. Since the resistance is far from complete, and is without effect on the virulence of the infection, it is more probable that the latter possibility is nearer the truth than the former. But if the first suggestion is true, it is the more likely that all sheep of the type are resistant and not merely those from some particular place or places.

Regarding the distribution of heartwater outside of South Africa we have no knowledge whatever. Only recently, indeed, was it authoritatively recorded outside of the infected area of the Colony, the infection of which began, so far as we have record, as recently as 1860. Now the bush veld of the Transvaal is known to have long been infected and it seems likely that the infected zone extends well up the east coast of the continent. The mortality due to the disease amongst the native goats kept by the kaffirs is reliably said to be very much less than amongst the introduced sheep and goats of the European farmers, and indeed the mortality must be much less since the flocks of the natives increased in areas where white farmers have lost practically all their sheep and introduced goats. This assumed resistance to the disease may, it seems not unlikely, be due to long association with the infection, in countries to the north and east from which the kaffir races have migrated to the Colony. For aught we know to the contrary, the disease may be prevalent uninterruptedly all along the eastern coasts and in parts of all the countries in which the fat rumped sheep have long been kept.

This possibility of the disease existing elsewhere than in South Africa, and of the Persian sheep and kaffir goat having acquired a resistance through long association with it, leads to the interesting speculation that there may exist woolled breeds of sheep that are equally resistant, and which if introduced to the Colony might develop into very valuable animals. Youatt mentions in his work, alluded to above, that much fine wool is grown in Persia.

Several parties are now endeavouring to arrange for importations of Persian sheep, and if an opportunity can be found a few of the animals bred oversea and the first of their pure bred progeny will be obtained for experiment. If the imported adults prove immune and the progeny only resistant, we will have good evidence that heartwater exists in the country from which the animals were reared, and incidentally an indication that the resistance is an hereditary acquirement. As experiments demonstrating resistance to the disease in animals they import will be an excellent advertisement of the suitability of their stock for heartwater districts, we hope that importers will take the hint to gratuitously supply the Department with the necessary animals for such experiments. All animals that survived the tests, and we hope all would, could be returned.

Experiments.

In considering the experiments which led to this article, it should be borne in mind that heartwater is a specific disease affecting sheep, goats, and cattle, due to an undiscovered something, probably a protozoan parasite, present in the blood. The disease is neither contagious nor infectious in the sense these terms are ordinarily used, but it is easily transmitted by introducing a little fresh blood, 2 c.c. or more, from a sick or recovering animal into the blood stream of a healthy susceptible animal. In the ordinary course the disease gets from animal to animal through the agency of ticks. So far as we now know, only one kind of tick, the so-called Bont Tick (Tortoise Shell in some districts), *Amblyomma hebraeum*, is concerned. This tick acquires the infection in one stage of its life and transmits it at a later stage several weeks or months later, and then, it appears, only if certain temperature conditions have meanwhile been fulfilled. The disease is highly fatal both when induced from infection conveyed by the tick and by intravenous injection of virulent blood. There seems a varying degree of virulence on the veld due to a factor or factors still not made clear, but the mortality amongst flocks of susceptible small stock brought on to highly infected veld is said to be often above ninety per cent. The disease first shows itself by fever commencing in about eight to twelve days from infection by inoculated blood, and about eleven to eighteen days when through the bite of a tick. The fever may terminate in death at any time in its course, but may subside after four to twelve days and the animal recover. During the fever period and for an indefinite period of less than a month afterwards the blood is infective; then it becomes and remains, so far as we know, quite innocuous. Subsequent re-infection with the disease, even fatal re-infection if the first attack were mild, may occur and again render the blood temporarily infectious. Death is usually preceded by brain disturbance resulting in characteristic "fits."

All the animals used in the experiments were procured in the south western districts, a part of the Colony far removed from the infected area, and all are believed to have been locally bred. The tick infections were made by applying a limited number of specimens to an ear or leg under the shelter of a calico covering; and the inoculations by injecting into the jugular vein the amount of freshly drawn blood indicated for each animal.

The Persian sheep used were all wethers and were procured from two sources. The first half dozen, Nos. 106, 107, 108, 120, 133, and 134, were kindly purchased for the work by Mr. A. G. H. Teubes, of Robertson, who got them from a local farmer. These sheep were remarkably uniform in size and markings and had very small thin tails set askew from the rump. Dr. Hutcheon judged them to be sixth-eights or more pure Persian.

The balance of the sheep, Nos. 143, 153, 144, 157 and 195, came from a flock in the neighbouring district of Worcester. They may have been likewise about six-eighths pure Persian, but they were less uniform in the markings of the body and in the size and shape of the tail than were the first. Two of them had quite tapering tails, but all had the characteristic fat rump, long slim legs, and coarse hair black on the head and white on the body. In height all the Persians stood about the same as the average merino.

The first tests were with Bont tick nymphs that fell as larvæ from dying goat No. 94 in late March, 1903. These ticks were used to infect Persian sheep Nos. 106, 107, and 108, in the middle of June, and all three reacted. The infection of three cattle, and six goats of both sexes and various ages, by similar ticks off No. 94 during the same period served as a control.

The six goats died, each in fifteen to twenty-four days from the date the ticks were applied to it. One of the cattle also died; its death was doubtless in part caused by liver fluke, but an inoculation into a goat with the result of inducing fatal heartwater proved that it certainly had contracted the disease. The other two cattle, No. 16, an old cow, and No. 11, a young ox, suffered slight fever only; the infection of No. 11 was demonstrated by the death of a merino inoculated from it, and of No. 16 by fatally resulting inoculation into Goat 121 and a young ox, No. 12.

The strain of the disease from one of the six goats, No. 111, was passed by the inoculation of 10 c.c. of blood into Persian No. 120. Fever from the twelfth to the twentieth day followed but no outward signs of ill ness. Blood was drawn on the fourteenth and twentieth

days and passed, respectively, into Goats 125 and 127 with the result of killing both with heartwater in fourteen and sixteen days.

The strain from Ox 16 after passing through Ox 12, was put through Nos. 20 and 7, young oxen, in succession. Both died in consequence. From Ox 7 the strain was then passed successively through Persians 133, 134, 143, 154, and 157. Fever resulted in every case but no outward indication of illness was noticed in a single one. As controls, goats were inoculated along with Persians 133, 134, and 157; they all died of the disease twelve to sixteen days later.

Bont larval ticks were reared on Persian 157 just after the fever lapsed, and after these had moulted to nymph stage their disease producing power was tested by applying a few specimens to each of four goats, one ox, and Persian 153. Three of the goats died within three weeks. The fourth, No. 174, was made very ill but due to efforts mode to prolong its life as long as possible it survived for several weeks; it was heavily bled twice during the fever and its strength sustained by warm gruel and brandy. The ox suffered a prolonged attack of fever and died, as did also several goats inoculated from it not shown in the diagram. The Persian fevered at the proper time but unconcernedly continued to feed and thrive as had its predecessors subjected to the infection.

Bont larvæ were fed on Goat 174 during its fever, and as nymphs some of these ticks have been used on Persian 195 and on five goats infected at different times. The Persian took the disease only mildly whilst all of the goats succumbed within twenty-four days despite efforts made to save some of them by bleeding and stimulants.

Thus eleven cross-bred Persian sheep have survived, without having shown distress, strains of infection fatal to everyone of twenty goats and four out of six cattle similarly tested. We consider that these Persians have been subjected to a more severe test than if they had been exposed on the most highly infected veld. Subsequent to their fevers eight of them, Nos. 106, 107, 108, 120, 133, 134, 143, and 154, were sent to Veterinary Surgeon Spreull, and from about the first of last December they have been kept by him on infected veld. One of them has disappeared and is presumed to have been stolen, but the others are reported to be still under observation and to have shown no indication of disease. Sometime before it was sent away, No. 106 had its immunity tested by an inoculation of 5 c.c. of blood from No. 133 in fever on September 4th ; no rise of temperature resulted whilst goat control, No. 135, died. Nos. 153 and 195, the last two Persians to have the fever, have had their acquired immunity tested by the application to them of disease ticks from goat 174 ; neither of them has been affected. More recently still, No. 153 has withstood an inoculation of 20 c.c. of virulent blood without any temperature reaction.—*Agricultural Journal* (Cape of Good Hope).

WESTERN COUNTIES VETERINARY MEDICAL ASSOCIATION.

The 47th general meeting was held at the Great Western Hotel, Taunton. The President, Mr. A. H. Oliver, Devonport, presided, and there were also present Professor John Dunstan, Edinburgh; Messrs. C. H. Golledge, Sherborne; E. W. Bovett, Bridgwater; W. T. Dunstan, St. Mellion; H. E. Whitemore, Langport; A. G. Saunders, Taunton; W. Roach, Exeter; E. J. Thorburn, Okehampton; R. E. L. Penhale, Torrington; W. G. Gillam, Minehead; C. E. Perry, Bristol; P. G. Bond, Plymouth; Wm. Ascott, Bideford; and Capt. E. B. Bartlett, Cairo; and Mr. J. Harrison, visitors.

The minutes of the annual general meeting having appeared in *The Veterinary Record* they were, on the motion of Mr. Bond, seconded by Mr. Roach, taken as read.

Letters of apology for non-attendance were read from Messrs. G. H. Gibbings, Wm. Penhale, Holsworthy; T. Olver, Wm. Penhale, Barnstaple; G. H. Elder, T. E. Baker, C. E. Turvil, and Professors Penberthy and Hobday.

A letter was read from Mr. W. Freeman Barrett thanking the members for their subscription of £5 5s. to the Victoria Veterinary Benevolent Fund.

PRESIDENTIAL ADDRESS.

A. H. Oliver, M.R.C.V.S.

Gentlemen,—My first duty is to thank you for the honour you have conferred upon me in electing me as your President for the ensuing year. I can assure you I appreciate it very much and shall endeavour with your assistance to carry out the duties to the best of my ability. It is not, however, my intention to-day to weary you by going over the oft beaten track of reviewing the history of the veterinary profession, either its present, past, or future state, neither do I intend to enter its political arena, which just at present seems to be anything but settled, because all of us to-day are kept so well posted in all these matters by that valuable weekly journal, *The Veterinary Record*, that anything I may have to say would, I think, be a waste of time and somewhat trying to your patience. I have thought, however, that it may be productive of some good if I have something to say with regard with regard to ourselves as an Association, and I ask your indulgence for a few minutes only, and promise you I shall not long detain you.

Now I take it that this, or any other Vet. Med. Association, if it wishes to meet with anything like permanent success must receive in the first place the individual attention of all its members, also their personal attendance as far as convenient from time to time at its meetings. Having now, as all of you are aware, three meetings a year it means that big effort must be brought to bear—and in this I think our worthy Secretary will bear me out, only to keep us supplied with ordinary subjects for discussion, leaving out the introduction of morbid specimens, the recording of interesting clinicals, to say nothing of the difficulty in getting special papers read to us at times by those who are experts. I feel assured that unless our meetings are made worth attending the attendance will become scant and very discouraging.

Now I have a word to say to those members of our Association who have recently joined us, particularly to our younger members, for I feel assured that it is to *them* in a great measure at least, must we look for the future welfare of this Association. I must ask them to keep us well supplied with materials for discussion. There are some of them just fresh from College life, full of the latest knowledge both surgical and medical, more than capable I feel certain to find us plenty of matter for discussion. I must also ask them to use their influence whenever they have a chance, in trying to obtain for us fresh members to join this Association, pointing out to them how interesting and instructive these meetings are, to say nothing of the good fellowship they are productive of. Gentlemen, I am certain that it is only by our straining a nerve to regularly attend these meetings that we can expect to make this Association what I take it it was intended to be when it was formed—an Association for the advancement of scientific knowledge for the fraternising of its members—getting to know each other better, thereby being the means of our placing implicit confidence in each other as members of a

world-wide and honourable profession, of having the title of gentlemen affixed to our names thereby preventing the ugly rumour one sometimes blushes to hear, that it is not our ability as veterinary surgeons which is oftimes doubted but our honesty. Now, gentlemen, this should not occur, neither do I think it would it we could convince the public that we trust each other, are honourable one to the other, are not to be bought by a tempting bait, however alluring it may be. Then some of the plums, which now I am afraid find their way into other channels, would be entrusted to us as general practitioners.

I shall not detain you longer, only to say that I trust that you will take the will for the deed, as I can assure you that my only object in endeavouring to briefly express these thoughts to-day is to endeavour to give a fresh stimulus to ourselves as an Association, and I trust that not only during my term of office as President of this Association but in years to come the Western Counties V.M.A. may be second to none in carrying on the good work it always has done, viz., the advancement of veterinary knowledge, the promotion of good fellowship amongst its members, and finally that by our united efforts we may be the means of showing the public that our *Vis unita fortior* so oftimes held up as the excelsis of our profession is no longer an insigma but become a solid fact.

Prof. DUNSTAN then gave an address on "Trypanosomes and Disease," the lecture being illustrated by a large number of very clear lantern slides.

The PRESIDENT said he was particularly glad to welcome Prof. Dunstan back to the West, and was very pleased to find such a good attendance to meet their old hon. sec. and friend.

Mr. BOND said he was sorry there was not much time for discussion as Prof. Dunstan had to leave by an early train. He was sure their best thanks were due to him for his interesting hour's discourse which threw so much new light on the diseases mentioned. This was one of the many advantages of this and kindred associations. Our old ideas on such things as atoms, blood corpuscles etc., were now being constantly revised. In his College days an atom meant the smallest possible particle, one incapable of further sub-division. Now the atom as we then knew it has been sub-divided. The blood corpuscle used to be considered a disc, a miniature leather sucker so to speak. To-day apparently it was considered more of a cell. Possibly it may be found to be a hæmoglobin carrier cell obtaining its nutrition by imbibing. The fissuring process by which the trypanosomes multiplied was extremely interesting, being a contrast to the more familiar division by budding. The only fly in England resembling the tsetse, or the only one with which we are familiar is the New Forest fly, which invariably attacked fresh horses in the Forest and caused them to become very excited. As a curious coincidence, if nothing more, he well remembered a case of a mare in the Forest suffering apparently from acute colic two days in succession, and on closely examining her on the second day a Forest fly was found on the udder on removing which the colic-like symptoms ceased. He should like to know if these flies injected a poison like the tsetse, or do they simply irritate by their crab-like action? There were many other things he would like to have talked about, but being short of time he would leave others to continue the discussion.

Mr. W. T. DUNSTAN said his brother had omitted to mention one peculiarity of T. Evansii, viz., that it could only be found when the fever was at its height. When the temperature ran up to 106 was the only time the trypanosome could be found. The clinical symptoms in the later stages of surra were very like those in purpura, except that the swelling of the legs was not so marked.

Mr. THORBURN said it was a great pleasure to see Prof. Dunstan once more amongst his old friends, and he had been much interested in listening to the paper, as it was on a subject which particularly appealed to him. In redwater he and Mr. Montgomery had found many of these trypanosomes, and the slides which they had submitted to Prof. Mettam were practically the same as those which Prof. Dunstan had exhibited to them to-day. The discovery of the trypanosomes had completely revolutionised the old ideas as to redwater. Ticks undoubtedly acted as carriers on the infection, but in what manner was still a mystery. He had had many cases of redwater without the usual symptoms, *i.e.* trypanosomes were found without any discoloration of the urine. There was loss of appetite, weakness, constipation, and a high temperature, as high as 107. These cases were much more serious than the ordinary ones.

Mr. GOLLEGE said the new light on the organism of redwater was most interesting. It was significant that this disease was always to be found in poor land where ticks are very prevalent, but he should like to know how it is accounted for when occurring in calves. He had had several such cases, but it was possible they were not the true form of redwater.

Mr. R. E. L. PENHALE said the paper was noticeable for breaking what was to some of them new ground. At any rate he knew very little about the first part. Redwater they were all familiar with, being fairly common in that part of the country. He should be most interested to hear when the connecting link was found. In days gone by we had all sorts of ideas and theories as to the cause of the disease, and it was a very good thing they had now discovered so much about it. He felt very much indebted to Prof. Dunstan for his very interesting lecture.

Mr. ROACH said as time was pressing he would not detain the meeting but wished to offer his thanks to Profesor Dunstan for his very instructive address.

Prof. DUNSTAN in reply said he had no time left now to do more than thank the members for the very hearty welcome they had extended to him. It had been a very great pleasure to meet so many old friends, and he hoped some day to be again permitted to come amongst them. With regard to Mr. Bond's query about the New Forest Fly, the excitement was due to nothing more than the irritation which was caused by the peculiar oblique manner of travelling adopted by the fly. There was nothing deposited nor injected by it.

He should like before leaving them to refer to the great progress which we were making as a profession. He was quite sure the University degrees which were being instituted in connection with the Dick and other Veterinary Colleges marked a big step forward, and we ought not to rest content until we had the degrees of Bachelor and Doctor of Veterinary Science.

Mr. STABLEFORTH was proposed by Mr. Rooch, and seconded by Mr. Thorburn, as a member of the Association.

On the proposition of the President, seconded by Mr. Bond, it was decided to hold the November meeting at Plymouth.

The meeting then terminated with a hearty vote of thanks to the President.

SOUTH DURHAM AND NORTH YORKSHIRE VETERINARY MEDICAL ASSOCIATION.

The usual quarterly meeting was held in the North Eastern Hotel, Darlington, on Friday, 10th June, Mr. E. R. Gibson, Seaham Harbour, in the chair. There were also present: Messrs. W. N. Dobbing, J. H. Taylor, and C. G. Hill, Darlington; E. H. Pratt, Northaller-

ton; A. M. Munro, Veterinary Inspector to the Board of Agriculture; and W. Awde, Stockton-on-Tees.

Mr. DOBBING proposed, and Mr. HILL seconded, that the minutes of the previous meeting be taken as read and confirmed. Carried.

Several letters were read and the Secretary was directed to send replies.

It was decided that the Association contribute a sum of thirty shillings towards expenses incurred in connection with Professor Dunstan's paper in the preparation of slides, etc.

The question of appointing delegates to the Royal Institute of Public Health meeting at Folkestone and to the Sanitary Institute's meeting at Glasgow was then considered and the correspondence in connection having been read it was felt that the appointment of delegates to the two meetings could not be entertained on account of there being no funds available. It was at last decided that as Mr. Gibson had been appointed to represent the North of England Vet. Med. Association at the Sanitary Institute's Congress at Glasgow, he be asked to represent this Association also at that meeting, and that the expenses incurred be divided between the two Associations. Mr. Gibson having consented to this course Mr. Taylor proposed, and Mr. Pratt seconded, its adoption, and it was carried.

ELECTION OF OFFICERS.

President.—Mr. Taylor proposed, and Mr. Dobbing seconded, that Mr. HARRY PEELE, M.R.C.V.S., Durham, be elected to the office of President for the coming year, and it was carried unanimously.

Vice-Presidents.—Mr. Gibson proposed that Mr. BLACKBURN, M.R.C.V.S., Barnard Castle, and Mr. SNAITH, M.R.C.V.S., Bishop Auckland, be elected Vice-Presidents. Carried.

Hon. Sec. and Treas.—Mr. Taylor proposed, and Mr. Hill seconded, the election of Mr. AWDE, F.R.C.V.S. Stockton-on-Tees. Carried.

Auditors.—Messrs. DOBBING and TAYLOR were re-elected on the proposition of the Secretary, seconded by Mr. Gibson.

The following interesting cases were then related by the members and discussed.

The SECRETARY mentioned a case of considerable interest to himself which had occurred recently. He was called on 12th May to see a high stepping harness cob which had eaten nothing since 7th May when he was brought home from a farm about five miles away where he had been kept in a loose box for a month and occasionally driven in harness, during the absence of the family on a holiday. When seen he had been in harness that morning, but could not be induced to stand over in his stall, his movements were very erratic, and he could not be turned round in the stable. When set going he could travel fairly well, but did so in a very peculiar manner. When at rest he stood all in a heap, and when being driven the man said he did not respond to the bit. As the bowels were costive he had a dose given of Ol. lini. On the following day he appeared much the same and took little notice of anything. Treatment consisted of nux vomica and vegetable tonics, with a little Ammon. carb, as his pulse was very soft and weak. As he took no food he was further examined, and it was ascertained that he had no power either to take food into the mouth or to masticate it properly. Hand feeding with grass was ordered. He continued in this state for about a week when he gradually began to improve and in about another week was able to feed as well as ever. He was not put to work for two or three weeks until he recovered his strength, and has since made a good recovery. The cause of the attack was difficult to ascertain, no injury having been made out. At first it was looked on as one of azoturia, but ultimately believed to be one of paralysis in which the muscles of the head and neck were most involved.

One of the members asked if it was a case of tetanus. On being told that the cartilage nictitans did not move over the eye when the head was raised, he stated that he had seen a tetanus case where the cartilage was not affected. Tetanus was, however, negatived as there was no cerebral excitement present, the animal being more or less in a state of stupor.

Mr. DOBBING mentioned some cases of glanders which had occurred in Darlington. The animal which had first commenced was purchased at Brough Hill Fair and developed a thick leg and ulceration of schneideran membrane, and was condemned. Other three in the same stable were tested with mallein; two of them reacted and were destroyed, and one mare was left for further testing.

Mr. HILL mentioned a three-year-old cart horse with an umbilical hernia three or four inches in length. The lump felt solid when handled. An operation was decided on and the colt cast. On cutting through the skin there were the remains of umbilical cord about the thickness of a cart rope, which he removed with the ecraseur. After removal there flowed from it a quantity of urine. At first he felt somewhat anxious about it, but bound it up with a catgut ligature and fastened it the same as in a case of hernia. It sloughed in ten days and was properly healed, and the colt made a good recovery.

He also stated that he had recently met with a dog suffering from pneumonia in connection with distemper, in which the thermometer registered 110 F.

Mr. PRATT mentioned cases of milk fever treated by Schmidt's method, which had been most successful in his hands, but he now used chinosol and the admission of air, and that treatment was even more successful than the other, and the last seven or eight cases had all recovered.

Two cases lately occurred. One a Jersey cow which had had twelve calves; he found her laid on her side, tongue hanging out, cold extremities. Injected the udder with chinosol and air; cow got up all right in a short time and made a good recovery.

The other cow was down on arrival but not quite comatose. Went down at 7 a.m., injected at 12 noon, and was up again at 7 p.m. The treatment had been very satisfactory in his hands.

Mr. GIBSON was called early on Monday to a mare which foaled at 10 p.m. Sunday night, pulse between 80 and 90, fœtal membranes had not been expelled, laminitis present, blowing heavily. He removed fœtal membranes, and before doing so injected chinosol and syphoned it off. Only half the quantity injected came away. Mare showed much pain and rolled about the box. He left four doses of anodyne medicine and went away about 1 p.m., mare died in a state of collapse. On post-mortem the uterus was found to be ruptured, the rent being about three inches long.

Mr. PRATT had met with two cases in cows of a similar nature. One he was told about, the other he found himself before commencing to remove the membranes, and called the owner's attention to it. The placenta was hanging out with a torn cotyledon, and a strip of uterus about half an inch wide had also been torn away.

Mr. TAYLOR related his experience of the injection of chinosol and air in cases of milk fever. It was marvellous. He used 15 grs. to a quart of warm water, but injected plenty of air and used friction to the udder at the same time.

A vote of thanks to the Chairman concluded the proceedings.

W. AWDE, *Hon. Sec.*

DISEASES OF ANIMALS ACTS 1894 TO 1903. SUMMARY OF RETURNS.

Period.	Anthrax.		Foot-and-Mouth Disease.		Glanders (including Farcy)		Rabies. Cases Confirmed.		Swine Fever. *	
	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Dogs.	Other	Out-breaks.	Slaughtered *
GT. BRITAIN. Week ended Sept. 3, 1904	16	22	..	..	33	76	..	..	7	39
Corresponding week in 1903 ..	12	21	..		30	51	..	..	15	34
Corresponding week in 1902 ..	9	10	..	..	34	57	..	..	19	96
Corresponding week in 1901 ..	12	12	..		24	46	..	..	46	246
Total for 36 weeks, 1904	684	1078	..	..	1101	1955	..	..	1003	4615
Corresponding period in 1903 ..	557	853	..	..	1056	1734	..	..	1124	5722
Corresponding period in 1902 ..	485	778	1	120	818	1452	12	11	1234	5596
Corresponding period in 1901 ..	446	630	12	669	954	1631	1	1	2707	13080
Board of Agriculture and Fisheries, Sept. 6th, 1904.										
IRELAND. Week ending Aug. 27, 1904	..	..	..	..	..	..	..	..	12	205
Corresponding Week in 1903 ..	..	..	..	..	..	..	..	..	8	136
Corresponding Week in 1902 ..	..	..	..	..	..	..	..	..	5	14
Corresponding Week in 1901 ..	..	..	..	..	..	..	..	..	7	72
Total for 35 Weeks, 1904	2	2	..	..	8	29	..	..	151	3094
Corresponding period in 1903 ..	2	3	..	..	2	3	2	..	129	2877
Corresponding period in 1902 ..	..	..	..	..	7	26	..	..	138	2683
Corresponding period in 1901 ..	1	2	..	..	4	4	1	1	193	3273

Epizootic Lymphangitis, Week ending Aug. 6, 1 case.

Department of Agriculture and Technical Instruction for Ireland, (Castle Street), Dublin, Sept. 1st, 1904.

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection.

SEVEN HUNDRED CAVALRY HORSES STAMPEDE.

The stampede of over 700 cavalry horses has provided an exciting and unwelcome prelude to the Army manœuvres, which began on September 5th. The animals careered at full gallop for miles in all directions, and a large number were killed or injured.

The stampede occurred in the encampment of General French's cavalry force on Baddesley Common in the early hours of Sunday morning. The infantry had proceeded on Saturday direct to Southampton, but the mounted troops and artillery took up temporary quarters about six miles from the town.

Soon after midnight it was reported that an officer's charger had fallen in its lines, and was unable to rise. A veterinary surgeon, who saw the case, found that the animal had broken one of its legs, and ordered that it should be destroyed. A slaughtering instrument, known as the silent hammer, was used, but failed to effect its purpose, and in order to put the horse out of its suffering a revolver was produced.

The flash and report so startled some of the adjoining horses that they broke away from their tether. As they dashed along the line hundreds of others followed their example, and trampled some tents filled with sleeping men to the ground.

A scene of almost indescribable confusion followed. The attendants promptly raised the alarm, and all the soldiers in camp hurried out to drive the animals back; but it was absolutely impossible to stop the onrush. In their efforts to do so several received minor casualities, one trooper being kicked in the face

Part of the common in fenced with barbed wire, and the frightened animals in their mad rush dashed against it, many lacerating their limbs, which were horribly torn. Their screams and terror and the consequent panic was terrible. They scattered in all directions, some taking the Romsey road and others careering wildly across the country, while another contingent made for Southampton. They entered the town by several routes at full gallop, the ring of their hoof on the hard roadway resounding like a number of anvils in the stillness of the night. The whole city was awakened by the unusual clatter, and wondered as to the cause.

Several of the animals were severely injured in their headlong flight. Part of the Southampton tramway route is under repair, and the horses, in their reckless rush, came to grief amongst the obstacles and trenches and smashed the guiding lanterns to atoms. Like the charge of a cavalry regiment another squadron careered down the High Street and, reaching the ancient Bargate, smashed themselves against the masonry in their frantic efforts to force a way through the narrow passage.

A number of the animals made their way to the water, into which they plunged. Men in boats put out and sent in as many as possible, landing stages having to be broken down to get the horses ashore. Several animals were drowned. One broke its leg with a fall near the entrance to the town pier. Another injured its shoulder and both had to be killed. Others were injured by the iron-shod picket pegs which they carried off, and which dragged behind them.

Another drove of seventy of the stampeded horses galloped through Winchester, making for Aldershot. Many were shockingly injured. A coachman named Chandler stopped nineteen out of twenty-two horses that passed him.

Immediately after the stampede several parties were sent to scour the country for miles round. Some of the horses were found lying in an exhausted state by the

roadsides, and others, shockingly injured, had to be slaughtered.

A telegram received from the camp at a late hour last night stated that between eighty and hundred horses were still unaccounted for. Twelve animals were killed in camp, and many others elsewhere. Fully two-thirds of the horses were suffering from fractures, cuts, and bruises. A trainload of wounded animals will be sent back to Aldershot for surgical treatment.

Practically the whole of the stampeded horses belonged to the 8th Hussars, and in all probability the mounts of the 1st Dragoon Guards will be brought from Southampton to take their places.

An official inquiry is being held.

Disease and Weeds.

Considering that there are several infectious and costly diseases of stock the public notification of which has not yet been made compulsory, he would be an optimist indeed who should anticipate legislation on the subject of the compulsory destruction of weeds. The fact, however, that there are already official regulations in regard to farm-weed suppression in operation no farther off than the Isle of Man, we believe, and that in one at least of the Colonies and in Germany Government inspectors have the power to compel the spraying of orchards suffering from insect pests, would seem to suggest that more may yet be done than appears practicable just now in organising the attack on the unwelcome guests of the fields. Whether landowners as a class have fully exhausted their powers in the way of enforcing on their tenants the cleansing of the land in their occupation is perhaps doubtful. As to the reality of the weed nuisance, however, no one who has walked across some of the stubbles near London this year can be in much doubt. Unfortunately, the farmer who, at no small expense, keeps his holding clean is completely at the mercy of the thistledown and so on of careless or impecunious neighbours, who, in affording hospitality to weeds —which rival the cod and the herring in fecundity—forget that "one year's seeding is seven years' weeding." The British agriculturist may have his faults, but, however literal and Boer-like may be his interpretation of Scripture, surely he does not apply to himself the sentence, "Thistles shall the land bring forth to thee?"—*Westminster Gazette.*

Numbering the People.

The admirably edited "General Report on the Census of 1901," which has just been issued, will be welcomed both by those who find delight in statistics, and by those who are interested in knowing something of the mode of life of the 32,527,843 inhabitants in England and Wales. In this volume is set forth the number of houses occupied and those which were to let at midnight on Sunday, March 31, 1901, the average number of people who live in one room, and the number of those who lay their weary heads in "barns, sheds, and caravans"; the proportions of females to males, and the occupations, if any, of both; the number of persons there are to a square mile; at what age the average man marries, how many times he marries, and what chances the widow has of finding a second husband; what are the odds against being born a lunatic or dying in the workhouse and all sorts of like information.

But statistics, at their best, are unsatisfactory things. One can imagine how difficult it is to obtain even approximately, accurate details concerning the private affairs of over thirty-two million people; and it is only when comparison is made between censual figures and those which are of necessity more nearly accurate that the doubtful value of the former is made strikingly apparent. According to this Blue Book, the persons returned as physicians, surgeons, or general practitioners numbered 22,698, against 19,037 in 1891, showing an increase of 19·2 per cent., as compared with an increaae of 25·9 per cent. in the interval between the two previous censuses, whereas, according to the medical register for 1901, the number of persons registered as medical practitioners was 36,355. Again, according to the report, persons whe returned themselves as dentists or dentists' assistants were 5,309 in number (of whom 140 were women), while the number of registered dentists in 1901 was 4,509, which leaves a very small margin of assistants.

Under the headings of manufacturing chemistry and alkali manufacture there were returned 27,220 persons, the increase being 26·7 per cent. on the numbers so returned in 1891. The counties of Lancaster and Chester are the most important centres of alkali manufacture, containing, respectively, 4,543 and 3,400 persons out of the total of 9,705 engaged in that industry. Chemists and druggists (including drysalters), upon whom the distribution of these products largely falls, increased from 23,397 to 28,448, or 21·6 per cent. But these figures (says the report) include not only chemists in the ordinary acceptation of that term, but also the more highly skilled bodies of men known respectively as consulting chemists and pharmacists. The number of "chemists and druggists and pharmaceutical chemists" on the Register of the Pharmaceutical Society in 1901 was 15,863; the term "drysalter" is, of course, vague. but there were evidently over 12,000 of them in existence at the time the census was taken.

The number of persons classed as veterinary surgeons has fallen from 3,193 in 1891 to 2,941 in 1901. There are, however, at least two cogent reasons why these figures should not be accepted without examination. In the first place, at the date of the recent census the war in South Africa doubtless required the services there of a number of veterinary surgeons who are ordinarily employed at home. In the second place, there is reason to believe that less care was observed in returning occupations at the census of 1891 than at the more recent census; and that on the earlier occasion there was greater tendency for farriers to describe themselves in the schedules as veterinary surgeons.—*The Pharmaceutical Journal.*

ANATOMICAL DRAWINGS.

Thanks to the special anatomical knowledge and artistic skill possessed by Mr. H. C. Wilkie, F.R.C.V.S., Government Veterinarian, the New Zealand Department of Agriculture has been able to secure a series of interesting charts of (1) the skeleton of the horse, (2) the foot and leg of the horse, (3) the udder (cow, mare, and ewe), and (4) the pregnant ewe, which have been executed in a manner reflecting the highest credit on the artist and on the Department. Each chart is accompanied by a key and full description in type.

The inception of the drawings arose from the desirability of having charts to facilitate explanations of certain points during the classes conducted by officers of the Division; but a large number have been struck off so that schools, local bodies, farmers' associations, and private individuals may secure copies at cost price on application to the Government printer.

The following particulars of each chart have been supplied by Mr. Wilkie:—

The Skeleton of the Horse.

This consists of a line drawing of all the bones of the horse which are seen in a direct side view, the animal being so posed as to show as much of the inner side of

both the fore and the hind limb of the farther side as possible.

The figure of the horse is practically half life-size, being nearly seven hands in height, and is printed on a chart measuring 50in. by 37in.

THE FOOT OF THE HORSE.

The more important points in the anatomical construction of the foot of the horse I hove endeavoured to show in a series of five drawings, which are all lithographed on one chart measuring 50 in. by 37 in.

As it was necessary these drawings should all be original, a large number of dissections had to be made in order to determine the best way of expressing the different structures in a simple way, and to obtain from the natnral objects drawings which were afterwards simplified and rendered diagrammatic.

DIAGRAMMATIC SECTIONS OF THE MAMMARY GLANDS.

On this chart there are four drawings in colour, which show the leading anatomical features of the udder of the cow, of the ewe, and of the mare; and a drawing of a highly magnified portion of gland tissue for the demonstration of the manufacture of the different constituents of milk. These drawings are from a large number of injected dissections, simplified so far as possible without the omission of any important detail.

The udders of the ewe and mare have been drawn to show the different details of structure of the mammary glands in these animals. The size of this chart is 37 in. by 50 in., and the udder of the cow is one and a half times the average natural size.

LONGITUDINAL SECTION OF THE PREGNANT EWE.

This is a drawing of a ewe which shows the structures seen on a longitudinal section of the animal with the lamb as it lies in the uterus immediately before birth.

Capt. HORACE HAYES, F.R.C.V.S.

The death of Captain Hayes at Southsea was, at any rate to his mere acquaintances, quite unexpected. He filled a space in literature, which no other person had previously occupied, and wrote about horses with a combination of practical and scientific knowledge never surpassed.

His most permanent work was certainly *The Points of the Horse* which we quite recently noticed as reaching its third edition.

His first book, *Veterinary Notes for Horse Owners*, is now in its sixth edition, and is as good a work of reference for the horse-owner as we know.

Captain Hayes was first an Artillery officer, then in the Buffs, and had seen a good deal of foreign service before he entered a Veterinary College He took his diploma in 1883, and his Fellowship in 1901.

A correspondent, writing of Captain Horace Hayes, whose death was alluded to in these columns the other day, says he was known all over the world as "Gentleman Hayes" He began his military career as lieutenant of Royal Artillery at Mian Mir, the cantonment of Lahore, on whose racecourse he distinguished himself. On leaving the service he had a life of ups and downs, sometimes as Army crammer, afterwards an excellent veterinary surgeon, always a horse dealer, and a bit of a showman. He toured the world showing how to handle fiery untamed steeds *à la* Rarey. Lunching at Simla with Sir Frederick Roberts, who said: "I have *all* your books in my library," "Gentleman" had a look round, and remarked grimly, "Somehow, General, I don't think you can have *all* my books. I can't find my "Manual of Tactics in Question and Answer"!" If Hayes had only had £1,000 a year of his own, he might have been a great general himself.—*Daily Chronicle.*

ARMY VETERINARY DEPARTMENT.

Extract from *London Gazette*,

WAR OFFICE, PALL MALL, Sept. 2.

Maj. A. F. Appleton to be Lieut.-Colonel, vice T. Flintoff, D.S.O., retired on retired pay. Major C. E. Nuthall to be Lieut.-Colonel, in succession to Col. B. L. Glover, C.B., deceased. The undermentioned gentlemen to be Lieutenants:—T. E. Burridge, L. M. Verney, G. W. Tyson, H. C. Dibben on augmentation; T. Haigh, in succession to Vet.-Maj. J. Burton, deceased; D. O. Turnbull, in succession to Vet.-Capt. S. M. Smith, resigned; F. W. H. Thomas, in succession to Vet.-Capt. J. A. Braddell, deceased; J. T. M. Hughes, in succession to Vet.-Capt. H. P. Turnbull, deceased.

Stations of Veterinary Surgeons in Cape Colony

Aliwal North	H. T. Armstrong, M.R.C.V.S.
Cape Town	W. G. Pakeman, M.R.C.V.S.
"	S. Elley, M.R.C.V.S.
East London	R. W. Dixon, M.R.C.V.S.
Elsenberg	R. Paine, M.R.C.V.S.
Fort Beaufort	J. F. L. Lyons, M.R.C.V.S.
Grahamstown	T. Bowhill, F.R.C.V.S.
Kokstad	W. A. Hutchence, M.R.C.V.S.
Knysna	J. A. Robinson, M.R.C.V.S.
Malmesbury	C. Goundry, M.R.C.V.S.
Molteno	W. H. Chase, M.R.C.V.S.
Somerset East	J. D. Borthwick, M R.C.V.S.
"	J. Spreull, M.R.C.V.S.
Uitenhage	G. W. Freer, M.R.C.V.S.
Vryburg	J. Neill, M.R.C.V.S.
Worcester	A. Goodall, M.R.C.V.S.

As there are now several qualified Veterinary Surgeons in private practice in Cape Town and its vicinity, Kimberley, and Port Elizabeth, the services of Government Veterinary Surgeons in these places will be available only in cases where an animal is suffering from a contagious or infectious disorder, or in cases which are, on other grounds, of public interest and importance.—*Agric. Journal*, August.

Appointments.

The committee of gentlemen elected by the Nairn Town Council, Nairn County Council, and Nairnshire Farming Society to advertise for and consider applications for the appointment of a veterinary surgeon for Nairnshire have appointed Mr. R. N. Lewis, Malpas, Cheshire, who will enter upon his duties at the end of this month.

Last week the Executive Committee of the Sutherland County Council, under the Diseases of Animals Acts, unanimously resolved to offer the appointment of veterinary inspector for the county to Mr. James Elder Pottie, M.R.C.V.S., Ellon, Aberdeenshire. The inspector will be the only veterinary surgeon in the County of Sutherland.

Mr. J. T. SHARE-JONES, M.R.C.V.S., late Demonstrator of Anatomy at the Royal Veterinary College, Camden Town, has been appointed Lecturer in Veterinary Anatomy in the Veterinary School, the University, Liverpool.

COMMUNICATIONS AND PAPERS RECEIVED.—Messrs. W. Awde, M.R.C.V.S. *The Evening News.*

We shall be obliged by early intelligence of all matters worth bringing under the notice of the profession, and thankful to any friends who may send us cuttings from local papers containing facts of interest.